

# ArenaMatch AM20

## DeltaQ array loudspeaker

### Product Overview

Bose Professional ArenaMatch loudspeakers bring proven DeltaQ sound quality and flexibility to outdoor installations — sports stadiums, arenas, outdoor entertainment centers, and more. Featuring an IP55 weather rating, ArenaMatch DeltaQ modules make it easy to create outdoor loudspeaker arrays that bring consistent, intelligible sound to every listener. Nine coverage patterns are available. Choose from modules with 10°, 20°, or 40° vertical coverage and easily swap between 60°, 80°, or 100° horizontal waveguides to build arrays that are lighter, require less installation time, and can lower overall system costs by delivering full coverage with fewer modules.



Shown with grille off

### Key Features

**Improve sound quality, consistency, and vocal clarity** with DeltaQ array technology, which allows directivity, or “Q,” to vary in each module to more precisely match coverage to audience area

**Easily customize horizontal coverage** with replaceable waveguides that allow you to further customize coverage and even form asymmetrical patterns for improved acoustic performance in left/right arrays

**Deliver high-SPL, long-throw music reproduction and vocal intelligibility** with a 14-inch neodymium woofer and six Bose EMB2S titanium-diaphragm neodymium compression drivers

**Install outdoors with an IP55 weather rating**, three-layer stainless steel grille, water-resistant woofer cone coating, industrial polyurethane exterior coating, and molded input cover

**Provide full coverage with fewer modules** — 10°, 20°, and 40° modules allow you to create arrays that improve sight lines, reduce weight, and lower system costs by requiring fewer modules compared to conventional arrays

**Reduce commissioning time** by using 40° modules for point-source applications and 10°, 20° and 40° modules for line arrays — all with the same transducers for consistent tonal balance

**Adapt to a variety of configurations** — all models ship standard with bi-amp capability, passive crossover, and 70/100V transformer inputs

**Streamline the design process** by combining with complementary Bose Professional products, such as ArenaMatch Utility zone-fill loudspeakers, PowerMatch amplifiers, and ControlSpace DSP

**Save time during installation** using Bose accessory mounting hardware or use the standard M12 threaded inserts to interface with custom array frames

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### Technical Specifications

Single Module Performance									
Frequency Response (-3 dB) <sup>1</sup>	60 Hz to 16 kHz								
Frequency Range (-10 dB)	55 Hz to 18 kHz								
Nominal Coverage Pattern (H × V)	60° × 20° (AM20/60) or 80° × 20° (AM20/80) or 100° × 20° (AM20/100)								
Recommended High-pass Filter	60 Hz with minimum 12 dB / octave								
Crossover	950 Hz internal passive or external bi-amp (Bose ControlSpace presets)								
70/100V transformer tap settings	70V: 100, 200, 400 W; 100V: 200, 400 W								
	Bose Extended Lifecycle Test <sup>2</sup>			AES Transducer Test <sup>3</sup>					
	LF (bi-amp)	HF (bi-amp)	Passive	LF (bi-amp)	HF (bi-amp)	Passive			
Power Handling, long-term continuous	600 W	150 W	750 W	750 W	200 W	900 W			
Power Handling, peak	2400 W	600 W	3000 W	3000 W	800 W	3600 W			
	AM20/60			AM20/80			AM20/100		
	LF	HF	Passive	LF	HF	Passive	LF	HF	Passive
Sensitivity (SPL / 1W @ 1 m) <sup>4</sup>	93 dB	105 dB	97 dB	93 dB	104 dB	96 dB	93 dB	103 dB	95 dB
Calculated max. SPL @ 1 m (Bose power test) <sup>5</sup>	121 dB	127 dB	126 dB	121 dB	126 dB	125 dB	121 dB	125 dB	124 dB
Calculated max. SPL @ 1 m (2-hour power test)	122 dB	128 dB	127 dB	122 dB	127 dB	126 dB	122 dB	126 dB	125 dB
Calculated max. SPL @ 1 m (Bose power test), peak	127 dB	133 dB	132 dB	127 dB	132 dB	131 dB	127 dB	131 dB	130 dB
Calculated max. SPL @ 1 m (2-hour power test), peak	128 dB	134 dB	133 dB	128 dB	133 dB	132 dB	128 dB	132 dB	131 dB
Transducers									
Low Frequency	1 × Bose LF14 neodymium 14-inch woofer (4-inch voice coil)								
High Frequency	6 × Bose EMB2S titanium-diaphragm, neodymium compression drivers (2-inch voice coil)								
Nominal Impedance	Passive: 8 Ω / Bi-amp: 8 Ω + 8 Ω								
Physical									
Enclosure Material	Exterior-grade birch plywood								
Finish	Two-part polyurethane coating, black								
Grille	Power-coated perforated stainless steel, acoustic foam, stainless steel mesh								
Environmental	Rated for direct-exposure outdoor installations (IEC 60529: IP55)								
Connectors	Barrier strips: passive in/through, bi-amp, and 70/100V, with cover								
Suspension/Mounting	8 × M12 threaded inserts (4 per side); 4 × M8 threaded inserts (2 per side)								
Dimensions (H × W × D)	437 × 783 × 416 mm (17.2 × 30.8 × 16.4 in)								
Net Weight	36.2 kg (80 lbs)								
Shipping Weight	43.3 kg (95 lbs)								
Accessories	U-bracket, array suspension kits, waveguide kits								
Product codes									
794042-6660	ARENAMATCH AM20/80 OUTDOOR LDSPKR 80x20								
794042-3360	ARENAMATCH AM20/60 OUTDOOR LDSPKR 60x20								
794042-8860	ARENAMATCH AM20/100 OUTDOOR LDSPKR 100x20								

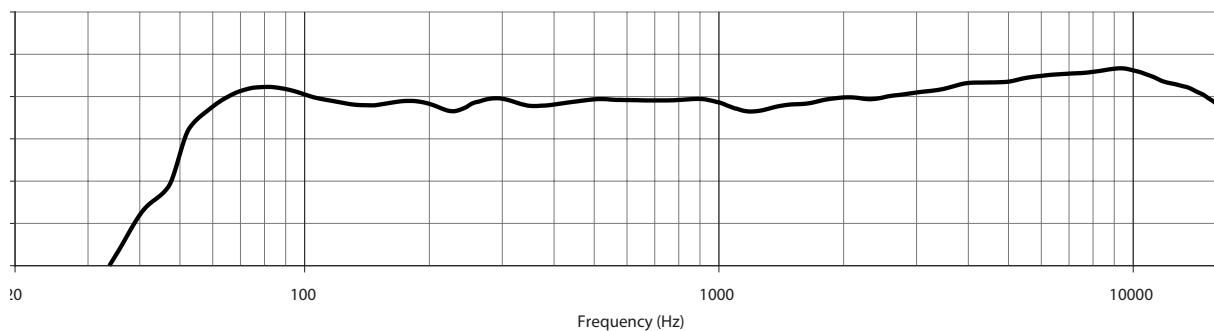
#### Footnotes

- (1) Frequency response and range measured on-axis in anechoic environment with recommended bandpass and EQ, single module.
- (2) Bose extended-lifecycle test using pink noise filtered to meet IEC268-5, 6-dB crest factor, 500-hour duration.
- (3) AES standard 2-hour duration with IEC system noise.
- (4) Sensitivity measured in anechoic environment with recommended bandpass and EQ.
- (5) Maximum SPL calculated using sensitivity and power ratings, exclusive of power compression.

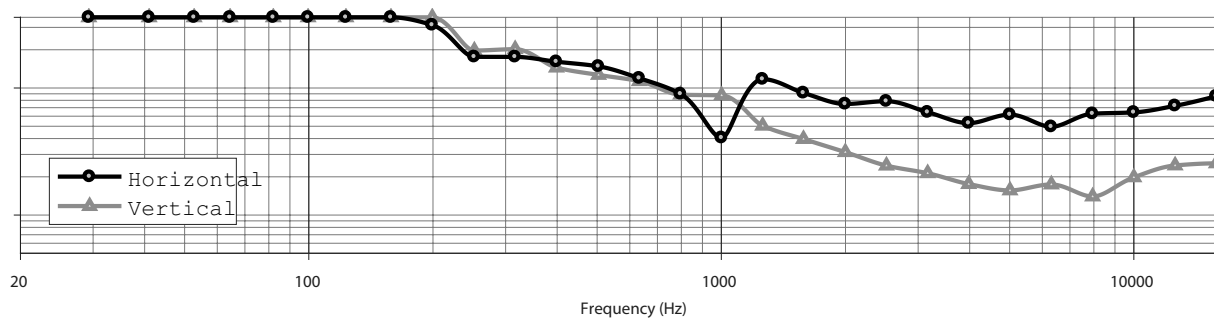
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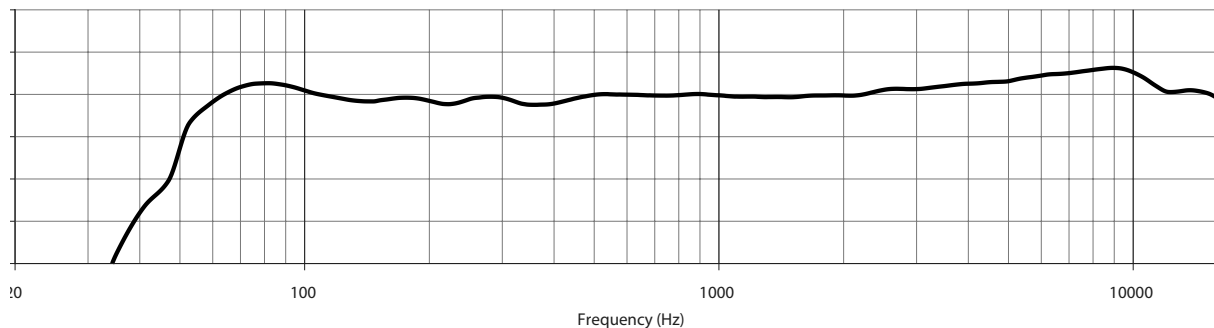
## Frequency response (60° waveguide)



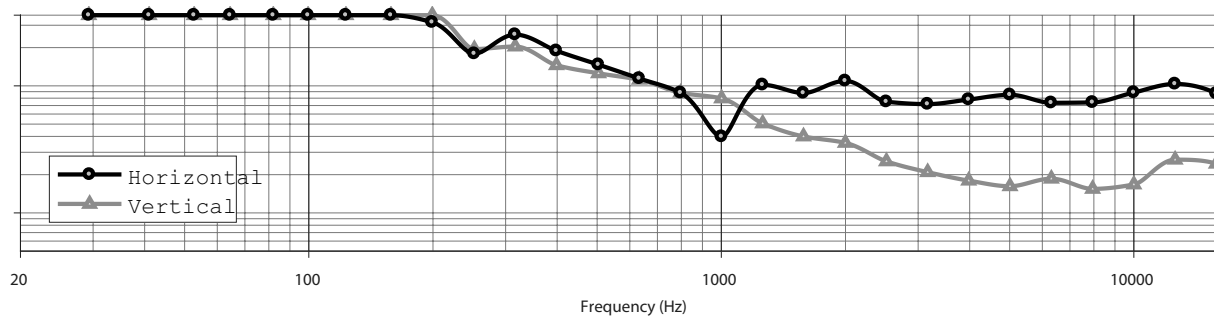
## Beamwidth (60° waveguide)



## Frequency response (80° waveguide)



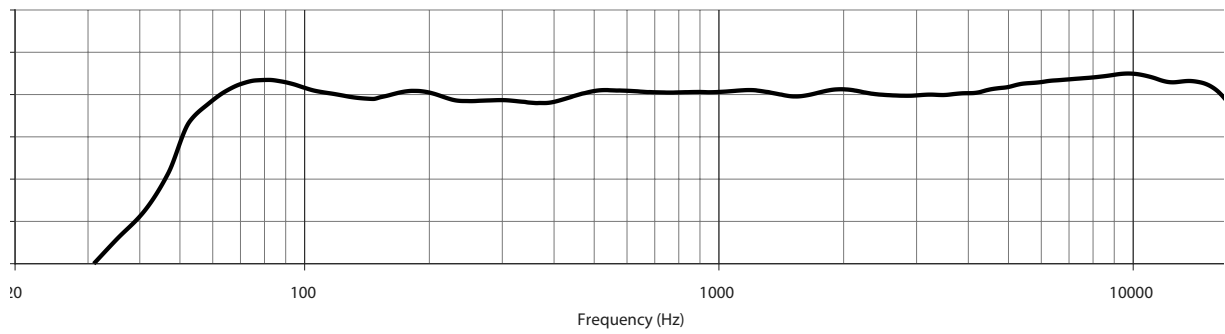
## Beamwidth (80° waveguide)



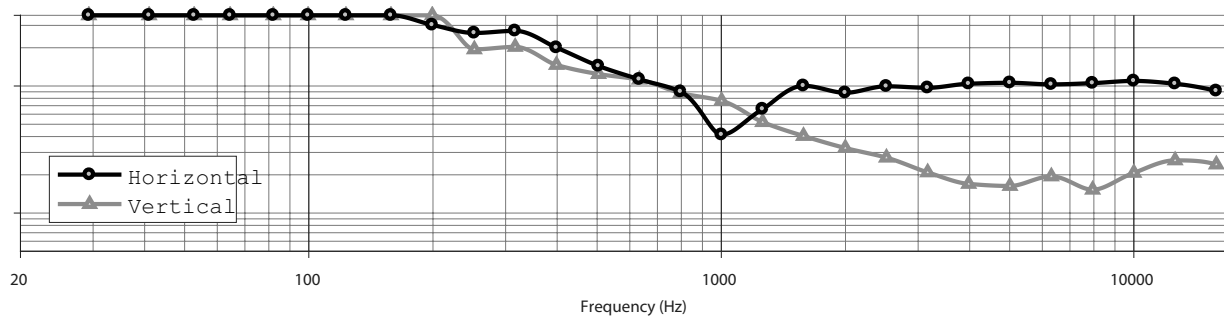
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## Frequency response (100° waveguide)

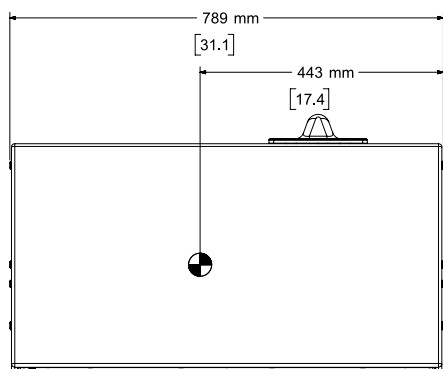


## Beamwidth (100° waveguide)

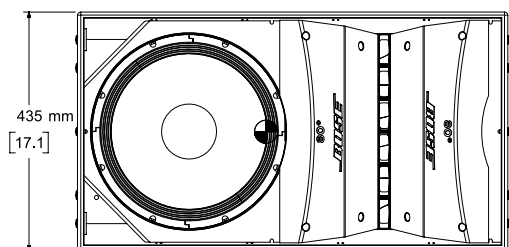
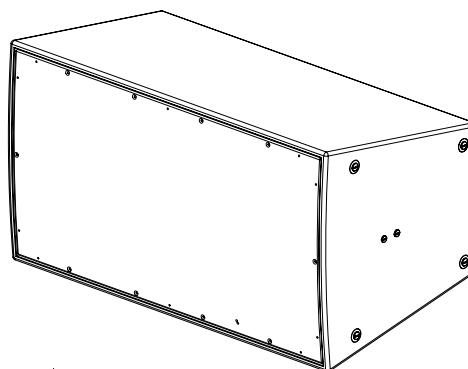


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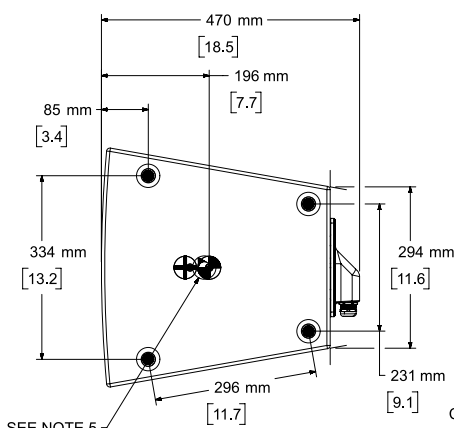
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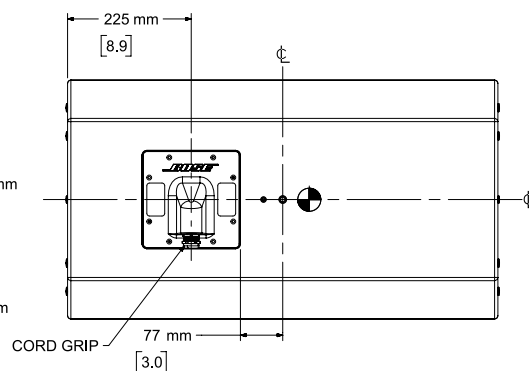
**Top View**



**Front View**  
GRILLE NOT SHOWN



**Right View**  
DIMENSIONS APPLY TO BOTH SIDES



**Rear View**

**NOTES:**

1. SYMBOL INDICATES CENTER OF GRAVITY
2. WEIGHT APPROX. 36.2kg/79.7lbs
3. DIMENSIONS ARE IN MILLIMETERS OVER INCHES
4. SYMBOL INDICATES M12 THREAD FOR AMMCPLAT
5. SYMBOL INDICATES M10 THREAD FOR AMUBRKT
6. SYMBOL INDICATES M6 THREAD FOR AIMING STABILIZATION

Specifications subject to change without notice. For additional specifications and application information, please visit [PRO.BOSE.COM](http://PRO.BOSE.COM).